

**Table S1:** RT-PCR conditions for *CCDC6::RET* and *NCOA4::RET* detection

<i>CCDC6::RET</i>	Temperature (°C)	Time	Cycle(s)
Hold stage	95	4 mins	1
PCR stage	95	30s	40
	50	30s	
	72	30s	
Final extension stage	72	7 mins	1
Melt curve stage	95	15s	1
	52	1 min	
	72	15s	
<i>NCOA4::RET</i>	Temperature (°C)	Time	Cycle(s)
Hold stage	95	4 mins	1
PCR stage	95	30s	40
	52	30s	
	72	30s	
Final extension stage	72	7 mins	1
Melt curve stage	95	15s	1
	52	1 min	
	72	15s	